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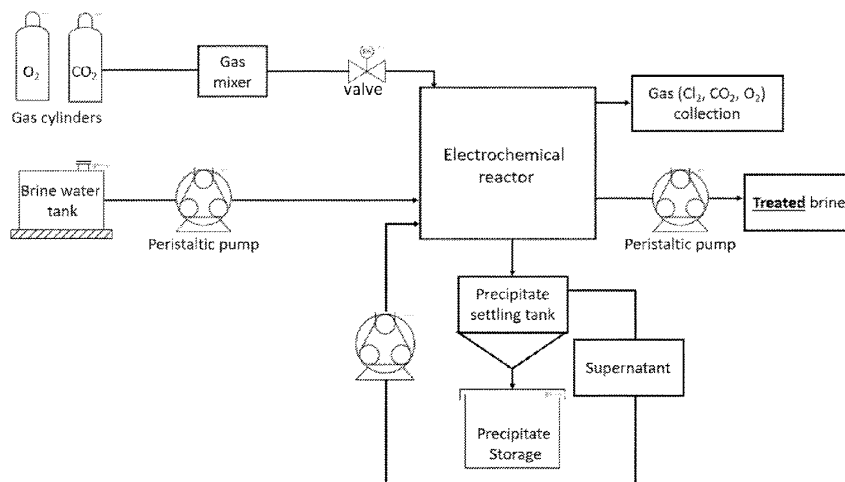
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(54) Title: AN ELECTROCHEMICAL APPROACH FOR MINERALS RECOVERY FROM BRINE WATER AND CO₂ CAPTURE

FIG. 1



(57) Abstract: Herein disclosed is an electrochemical reactor comprising an anode; a cathode; and an enclosure configured to (i) house the anode and the cathode in an electrolyte, and (ii) have a gaseous mixture comprising oxygen and carbon dioxide directed into a region of the electrolyte proximal to the cathode, wherein the cathode is configured to generate a metal carbonate from the electrolyte in the presence of the oxygen and carbon dioxide, and wherein the anode is configured to generate chlorine gas. A method for recovering minerals with carbon dioxide capture, and a system comprising the electrochemical reactor, are also disclosed.

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